

136, to provide a control function for controlling operation of a wireless communication apparatus of the wireless communication portion **132**, possibly together with a control portion of a control function that may be provided within the respective wireless communication apparatus (which will be described later in this text). These control functions may be, separately or jointly, referred to as control means (of the second device **130**). The second device **130** may comprise further components or portions in addition to those depicted in FIG. 1.

[0027] As described in the foregoing, each of the wireless communication portions **112**, **132** comprises one or more respective wireless communication apparatuses. A wireless communication apparatus may be provided e.g. as a respective chipset and/or as a respective communication module. For clarity and brevity of description, each wireless communication apparatus comprised in the wireless communication portion **112**, **132** may be considered as a single logical entity that may also be capable of processing at least some of the information received via the wireless connection and/or at least some of the information that is to be transmitted via the wireless connection without external control from other components of the respective device **110**, **130** (e.g. from the processor **116**, **136**, respectively). In an embodiment, a wireless communication apparatus of the wireless communication portion **112**, **132** comprises e.g. a wireless transceiver portion for wireless communication and a control portion (or a control function) for controlling operation of the respective wireless transceiver portion and for processing information received/transmitted via the respective wireless transceiver portion. Such a control function may be provided by hardware means, by software means or by a combination of hardware means and software means. As an example in this regard, the wireless communication apparatus may comprise a memory and a processor, and a computer program code stored in the memory may be arranged to, with the processor, provide the control function for controlling operation of the respective wireless communication apparatus either independently or jointly with the control function provided by the memory **115**, **135**, the computer program **117**, **137** and the processor **116**, **136** of the respective device **110**, **130**.

[0028] The wireless connection between a wireless communication apparatus of the wireless communication portion **112** and a respective wireless communication apparatus of the wireless communication portion **132** may be provided by employing a suitable short-range wireless communication technique or protocol. The term short-range wireless communication as used herein refers to a wireless communication technique or protocol that enables typical operating range in the scale of tens of meters, e.g. up to 100 meters. However, especially in an indoor environment, the operating range of such short-range wireless communication technique/protocol may be significantly shorter e.g. due to walls and other stationary structures as well as furniture etc. that are likely to partially block or interfere with the radio communication between wireless communication portions. On the other hand, in favorable conditions in outdoor use the operating range may extend to several hundreds of meters.

[0029] Examples of such wireless techniques/protocols include the Bluetooth (BT) Basic Rate/Enhanced Data Rate (BR/EDR) and the Bluetooth Low Energy (BLE) protocols, both specified e.g. in the Bluetooth Specification Version 4.1, Covered Core Package version 4.1 (publication date 3 Dec.

2013), incorporated herein by reference in its entirety. In the following, this document is referred to as a Bluetooth Specification.

[0030] While a number of short-range wireless communication techniques/protocols known in the art are applicable in the framework of the communication arrangement **100**, in the following some aspects of various embodiments of the present invention are described with references to the BT BR/EDR and BLE protocols. However, these protocols serve as illustrative and non-limiting examples in this regard, and the description generalizes into any wireless communication protocol.

[0031] In order to facilitate description of various embodiments of the present invention, e.g. following operational states of a wireless communication apparatus (of the wireless communication portion **112**, **132**) are applied:

[0032] a discoverable state of a wireless communication apparatus is an operational state in which the wireless communication apparatus is discoverable by other wireless communication apparatuses;

[0033] a discovering state of a wireless communication apparatus is an operational state in which the wireless communication apparatus is attempting to discover other wireless communication apparatuses;

[0034] a connectable state of a wireless communication apparatus is an operational state in which the wireless communication apparatus connectable by other wireless communication apparatuses;

[0035] a connecting state of a wireless communication apparatus is an operational state in which the wireless communication apparatus is attempting to create a connection with another wireless communication apparatus;

[0036] In general, a wireless communication apparatus of the wireless communication portion **112**, **132** may be operated in a single one of the operational states described above or it may be simultaneously operated in two or more of the operational states described above. Operation in each of the discoverable state, the discovering state, the connectable state and the connecting state may be implemented in one of a number of ways. Illustrative examples in this regard are provided later in this text.

[0037] In the following, this text may simply refer to a device **110**, **130** operating (or being operated under control of the respective control function or control means) in a certain state (e.g. in one of the states described above) when referring to an operational state of a wireless communication apparatus of the respective wireless communication portion **112**, **132**. Along similar lines, this text may refer to a device **110**, **130** carrying out a certain operation (e.g. receiving and/or transmitting certain message(s)) when describing the act of a wireless communication apparatus of the respective wireless communication portion **112**, **132** carrying out said certain operation under control of the respective control function or control means. This approach is believed to improve editorial clarity and readability of the text, while the technical meaning of these expressions remains clear.

[0038] A pair of devices that are within an operating range from each other with one device operating in the discoverable state and the other device operating in the discovering state may carry out a discovery procedure that involves detecting presence of the other device as well as requesting and acquiring information related to the connection creation and establishment between the pair of devices and/or identities of the